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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,778	07/31/2001	Mohamed A. Hashish	340058.533	4370

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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC  
701 FIFTH AVE  
SUITE 6300  
SEATTLE, WA 98104-7092

EXAMINER

NGUYEN, DINH Q

ART UNIT PAPER NUMBER

3752

DATE MAILED: 09/26/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/919,778

Applicant(s)

HASHISH ET AL.

Examiner

Dinh Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) 26-42 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other:

### DETAILED ACTION

1. Claims 26-42 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 9.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5, 7, 8, 20-23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Furgason.

Furgason discloses a high pressure fluid nozzle 2 (column 4, lines 42-48) comprising: a plurality of segments 30/32/34/40, each segment with an axial bore that form a continuous fluid passage (not numbered) through the plurality of segments, a metallic containment sleeve 26 (column 4, lines 29-41), segments 30/32/34/40 each has a selected length that made up the total length of the nozzle 2 and each has a different inner dimension with segment 30 has a greatest inner diameter (figure 2) and segment 30 with inlet end 52 has smaller bore than the bore 46 segment 40 at the discharge end, the nozzle segment 40 is fabricated from selected material to prevent abrasion (column 4, lines 35-41)

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 3, 4, 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Massa et al.

Massa discloses a high pressure fluid nozzle as shown in figure 13 and columns 16 and 17.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4, 6, 9-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furgason or Massa et al. in view of Tirrell.

Furgason or Massa et al. teaches all the limitations of the claims except for the segments are spaced from an adjacent segment to form a chamber. However, Tirrell discloses a high pressure nozzle with segments 9/10/11 that are spaced from the adjacent one to form chambers 12/13 and auxiliary ports 24 (for water and sand) 38 (for air). Therefore, it would have been obvious to one having ordinary skill in the art to have provided

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the device of Furgason or Massa with segments are spaced from an adjacent segment to form a chamber as suggested by Tirrell. Doing so would provide way to introduce materials into the nozzle.

With respect to claims 2, 4, 6, 13, and 15, to have the metallic sleeve shrink-fitted or metal spray forming around the segments is deemed to be an obvious matter of design choice, especially since applicant does not indicate why it is critical to have one or the other. Furthermore, Furgason or Massa did not disclose expressly that each segment is of 0.125-0.75. However, at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to select a length for each segment of the nozzle.

7. Claims 18, 19 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furgason or Massa et al. in view of Tirrell as applied to claims 2, 4, 6, 9-17 above, and further in view of Hashish et al.

Furgason or Massa et al. in view of Tirrell teaches all the limitations of the claims except for a temperature sensor or a pressure sensor. However, Hashish et al discloses a jewel orifice 1 and a pressure sensor 43 for an abrasive waterjet nozzle. Therefore, it would have been obvious to one having ordinary skill in the art to have provided the device of Furgason or Massa and Tirrell with a jewel orifice and a sensor as suggested by Hashish. Doing so would provide an effective abrasive nozzle. Different type of sensor is required for a preferred system in order to monitor the conditions of the nozzle is an obvious matter of design choice to a person of ordinary skill in the art.

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**Conclusion**

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents are cited to show the art with respect to a segmented nozzle: Fairchild, Schwartzkopf, and Goodwin et al.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dinh Q Nguyen whose telephone number is (703) 305-0248. The examiner can normally be reached on Monday-Friday 6:30-4:00 alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Mar can be reached on (703) 308-2087. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.



Dinh Q Nguyen  
Patent Examiner  
Art Unit 3752

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